

What is claimed is:

1. A guide catheter having proximal and distal ends, comprising:
an outer guide having an open lumen and a longitudinal pre-stress line
5 extending between a distal end and a proximal end of the outer guide;
an inner guide having an open lumen, the inner guide movably disposed
within the open lumen of the outer guide such that the inner guide can rotate
axially and translate longitudinally relative to the outer guide; and
a guide handle having a distal end connected to the proximal end of the
10 outer guide, the guide handle separable into at least two sections such that guide
handle separation splits the outer guide along the longitudinal pre-stress line at
the proximal end of the outer guide, the outer guide further splitting along the
longitudinal pre-stress line upon outer guide retraction in a proximal direction
relative to the inner guide.

2. A guide catheter according to claim 1, wherein the longitudinal pre-
stress line comprises a V-shaped notch on a surface of the outer guide.

3. A guide catheter according to claim 2, wherein the outer guide
20 further comprises a second longitudinal pre-stress line situated opposite the
longitudinal pre-stress line on the surface of the outer guide.

4. A guide catheter according to claim 3, wherein the second
longitudinal pre-stress line comprises a V-shaped notch on a surface of the outer
25 guide.

5. A guide catheter according to claim 1, further comprising a steering
tendon disposed within the outer guide, a distal end of the steering tendon
connected to the distal end of the outer guide, such that the steering tendon

deflects the distal end of the outer guide upon application of a tensile force to a proximal end of the steering tendon.

5 6. A guide catheter according to claim 5, further comprising a steering mechanism connected to the proximal end of the steering tendon, the steering mechanism applying a tensile force to the proximal end of the steering tendon.

7. A guide catheter according to claim 6, wherein the steering mechanism is connected to the guide handle.

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8. A guide catheter according to claim 7, wherein the steering mechanism includes a steering handle pivotably mounted to the guide handle.

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9. A guide catheter according to claim 1, wherein a distal end of the inner guide includes a pre-formed curve.

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10. A guide catheter according to claim 1, further comprising:
at least one electrode on the distal end of one or both of the inner guide and outer guide; and
at least one electrical conductor coupled to the at least one electrode, the at least one conductor disposed within one or both of the inner guide and outer guide.

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11. A guide catheter according to claim 1, further comprising an occlusion device connected to the distal end of the outer guide.

12. A guide catheter according to claim 1, further comprising an occlusion device connected to a distal end of the inner guide.

13. A guide catheter for delivery of a payload into a patient's heart, comprising:

an outer guide having an open lumen and a longitudinal pre-stress line extending between a distal end and a proximal end of the outer guide;

5 an inner guide having an open lumen adapted to receive the payload, the inner guide movably disposed within the open lumen of the outer guide such that the inner guide can rotate axially and translate longitudinally relative to the outer guide; and

10 a guide handle having a distal end connected to the proximal end of the outer guide, the guide handle separable into at least two sections such that guide handle separation splits the outer guide along the longitudinal pre-stress line at the proximal end of the outer guide, the outer guide further splitting along the longitudinal pre-stress line upon outer guide retraction in a proximal direction relative to the inner guide, the inner guide securing the payload to inhibit
15 dislodgment of the payload during outer guide retraction.

14. A guide catheter according to claim 13, wherein the longitudinal pre-stress line comprises a V-shaped notch on a surface of the outer guide.

20 15. A guide catheter according to claim 14, wherein the outer guide further comprises a second longitudinal pre-stress line situated opposite the longitudinal pre-stress line on the surface of the outer guide.

25 16. A guide catheter according to claim 15, wherein the second longitudinal pre-stress line comprises a V-shaped notch on a surface of the outer guide.

17. A guide catheter according to claim 13, further comprising a steering tendon disposed within the outer guide, a distal end of the steering tendon connected to the distal end of the outer guide, such that the steering tendon deflects the distal end of the outer guide upon application of a tensile force to a proximal end of the steering tendon.

18. A method of inserting a payload into a coronary sinus of a patient's heart, comprising:

providing a guide catheter comprising:

10 an outer guide having an open lumen and a longitudinal pre-stress line extending between a distal end and a proximal end of the outer guide;

an inner guide having an open lumen, the inner guide movably disposed within the open lumen of the outer guide such that the inner guide can rotate axially and translate longitudinally relative to the outer guide; and

15 a guide handle having a distal end connected to the proximal end of the outer guide, the guide handle separable into at least two sections such that guide handle separation splits the outer guide along the longitudinal pre-stress line at the proximal end of the outer guide, the outer guide further splitting along the longitudinal pre-stress line upon outer guide retraction in a proximal direction relative to the inner guide;

20 inserting a distal end of the guide catheter through the patient's right atrium via an access vessel;

25 axially rotating and longitudinally translating the inner guide relative to the outer guide to direct a distal end of the inner guide for finding and cannulating the patient's coronary sinus;

inserting the payload through the proximal end of the inner guide to insert the payload into the patient's coronary sinus;

removing the outer guide by separating the guide handle into at least two sections to split the outer guide along the longitudinal pre-stress line; and

further splitting the outer guide along the longitudinal pre-stress line by retracting the outer guide in a proximal direction relative to the inner guide, the inner guide securing the payload against dislodgment during outer guide retraction.

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19. A method according to claim 18, wherein the guide catheter further comprises a steering tendon disposed within the outer guide, a distal end of the steering tendon connected to the distal end of the outer guide, such that the steering tendon deflects the distal end of the outer guide upon application of a tensile force to a proximal end of the steering tendon, and wherein locating and cannulating the patient's coronary sinus further comprises applying a tensile force to the proximal end of the steering tendon to direct the distal end of the guide catheter.

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20. A method according to claim 18, wherein the payload comprises a pacing lead.

21. A method of inserting a payload into a coronary sinus of a patient's heart, comprising:

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providing a guide catheter comprising:
an outer guide having an open lumen and a longitudinal pre-stress line extending between a distal end and a proximal end of the outer guide;

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an inner guide having an open lumen, the inner guide movably disposed within the open lumen of the outer guide such that the inner guide can rotate axially and translate longitudinally relative to the outer guide; and

a guide handle having a distal end connected to the proximal end of the outer guide, the guide handle separable into at least two sections such that guide handle separation splits the outer guide along the longitudinal pre-stress line at the proximal end of the outer guide, the outer guide further splitting along

the longitudinal pre-stress line upon outer guide retraction in a proximal direction relative to the inner guide;

inserting a distal end of the guide catheter through the patient's right atrium via an access vessel;

5 axially rotating and longitudinally translating the inner guide relative to the outer guide to direct a distal end of the inner guide for finding and cannulating the patient's coronary sinus;

distally advancing the outer guide over the inner guide to seat the outer guide in the patient's coronary sinus;

10 proximally retracting the inner guide to remove the inner guide from the outer guide;

inserting the payload through the proximal end of the outer guide to insert the payload into the patient's coronary sinus;

15 removing the outer guide by separating the guide handle into at least two sections to split the outer guide along the longitudinal pre-stress line; and

further splitting the outer guide along the longitudinal pre-stress line by retracting the outer guide in a proximal direction relative to the payload.

20 22. A method according to claim 21, wherein the guide catheter further comprises a steering tendon disposed within the outer guide, a distal end of the steering tendon connected to the distal end of the outer guide, such that the steering tendon deflects the distal end of the outer guide upon application of a tensile force to a proximal end of the steering tendon, and wherein locating and cannulating the patient's coronary sinus further comprises applying a tensile
25 force to the proximal end of the steering tendon to direct the distal end of the guide catheter.

23. A method according to claim 21, wherein the payload comprises a pacing lead.